Exhibit 8

U.S. Patent No. 7,803,423

"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,	The Samsung Q60R QLED TV is an exemplary LED TV (the "Samsung TV") that includes nanoparticles.  For example, the Samsung TV includes quantum dots (the "Samsung Quantum Dots")[1].

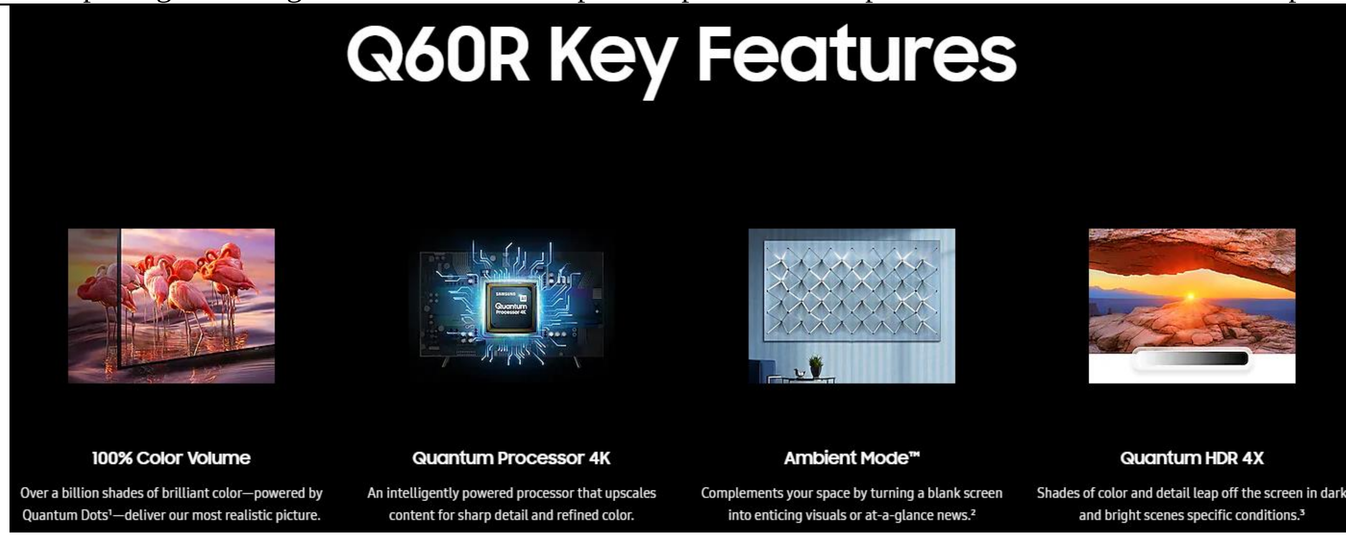
[1] Upon information and belief, all Samsung QLED TVs listed in Exhibit 6 include the same Quantum Dots. For example, Samsung QLED TV's display stack includes a Blue LED and layer of Quantum Dots in a Quantum Dot Layer.

See e.g., "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (SAIT, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slides 11, 16.
see also e.g., https://www.techradar.com/news/samsung-qled-samsungs-latest-television-acronym-explained;
see also e.g., https://www.samsung.com/global/tv/blog/stained-glass-and-quantum-dot-technology/;
see also e.g., https://www.displaydaily.com/article/display-daily/future-of-quantum-dot-display-niche-or-mainstream;
see also e.g., https://www.techradar.com/news/samsung-qled-samsungs-latest-television-acronym-explained.

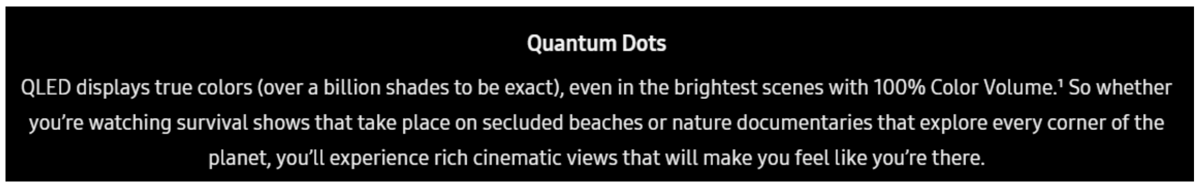
Samsung's QD-OLED TV displays operate in substantially the same way in that they are comprised of a Blue OLED and Quantum Dot layer.

See e.g., https://www.cnet.com/news/samsung-reportedly-working-on-quantum-dot-oled-tv-hybrid/.

"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"



See e.g., https://www.samsung.com/us/televisions-home-theater/tvs/qled-4k-tvs/43-class-q60-qled-smart-4k-uhd-tv-2019-qn43q60rafxza/

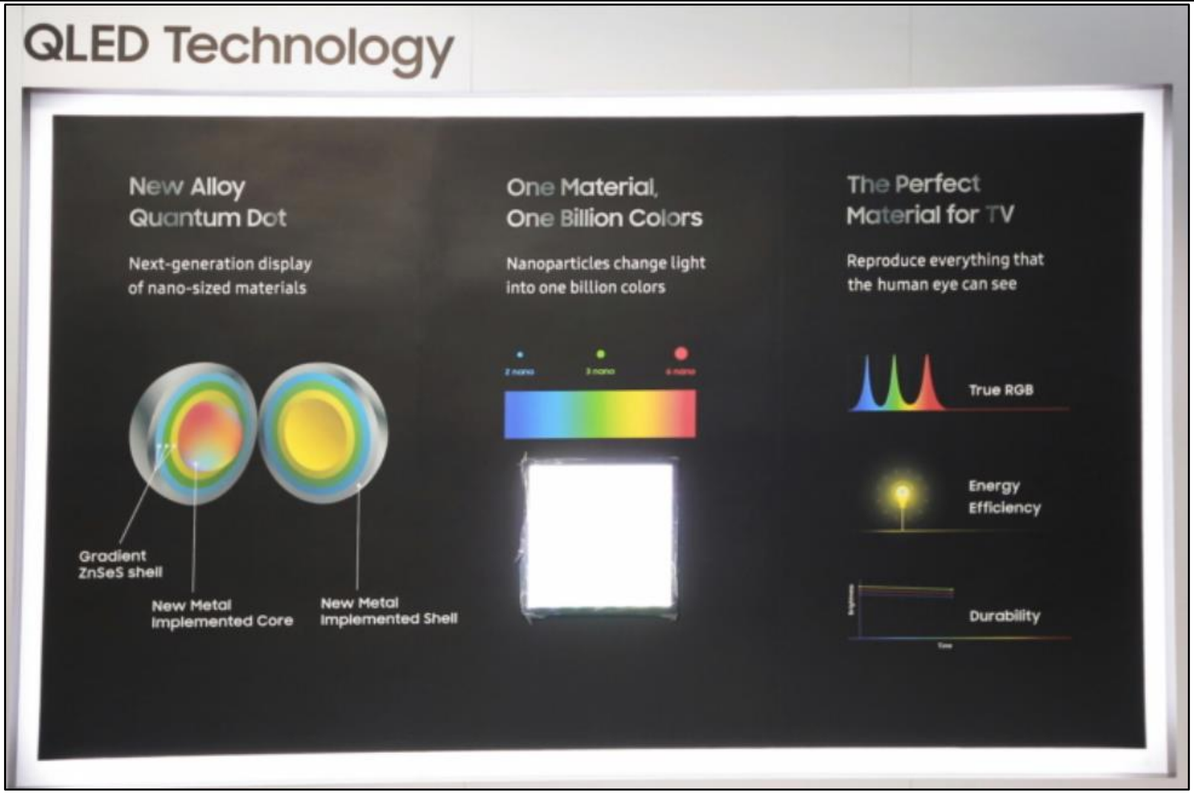

Quantum Dots

QLED displays true colors (over a billion shades to be exact), even in the brightest scenes with 100% Color Volume.¹ So whether you're watching survival shows that take place on secluded beaches or nature documentaries that explore every corner of the planet, you'll experience rich cinematic views that will make you feel like you're there.

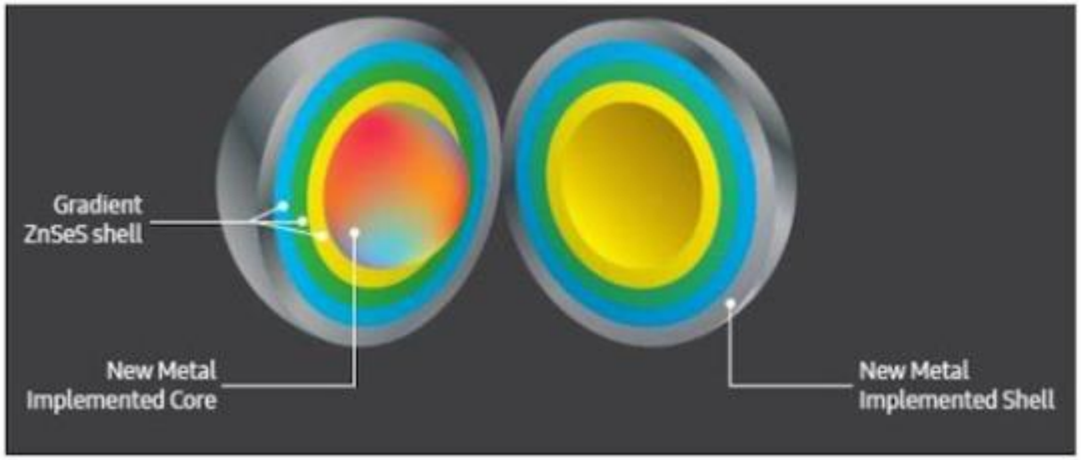
See e.g., https://www.samsung.com/us/televisions-home-theater/tvs/qled-tv/technology/

The Samsung Quantum Dots used in the Samsung TV are nanoparticles.

"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

	 *See e.g.*, https://news.samsung.com/global/how-qled-achieves-excellence-in-picture-quality; *See also e.g.*, https://www.hitechcentury.com/samsungs-next-gen-qled-tv-showcased-at-sea-forum-2017/;

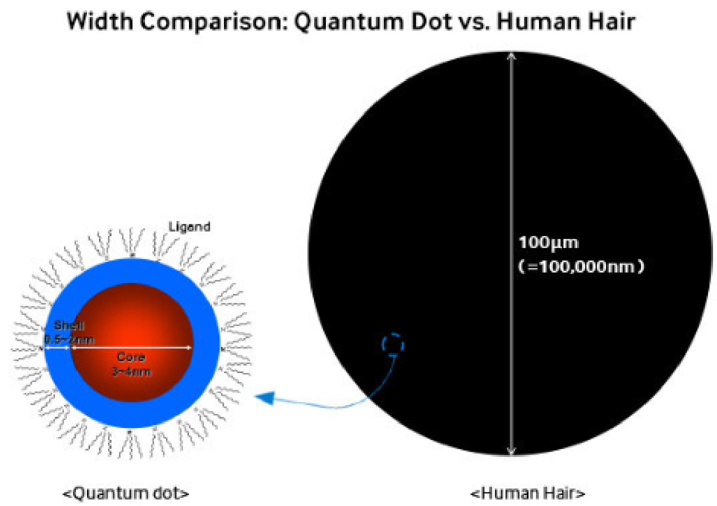
"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

	 A diagram showing the unique Quantum Dot design Samsung is using in its 2017 QLED TVs. PHOTO: SAMSUNG *See e.g.*, https://www.forbes.com/sites/johnarcher/2017/09/19/what-is-qled-and-why-does-it-matter/#732982817fb3.

"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

What Is 'Quantum Dot?'

Quantum dots are nano-sized crystals made of semiconductor materials. A nanometer (nm) is one billionth of a meter, which means these extra-small particles are smaller than 1/10,000 of a single strand of human hair.*



Quantum dots can be made of different kinds of elements, but when they're regulated down to a size small enough, they possess physical properties that make them suitable for many different applications. For example, quantum dots are very efficient in absorbing and then emitting light. Based on this quality, quantum dots are being researched in areas such as solar panels, bioimaging, and, of course, display.

See e.g., https://news.samsung.com/za/why-are-quantum-dot-displays-so-good.

"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

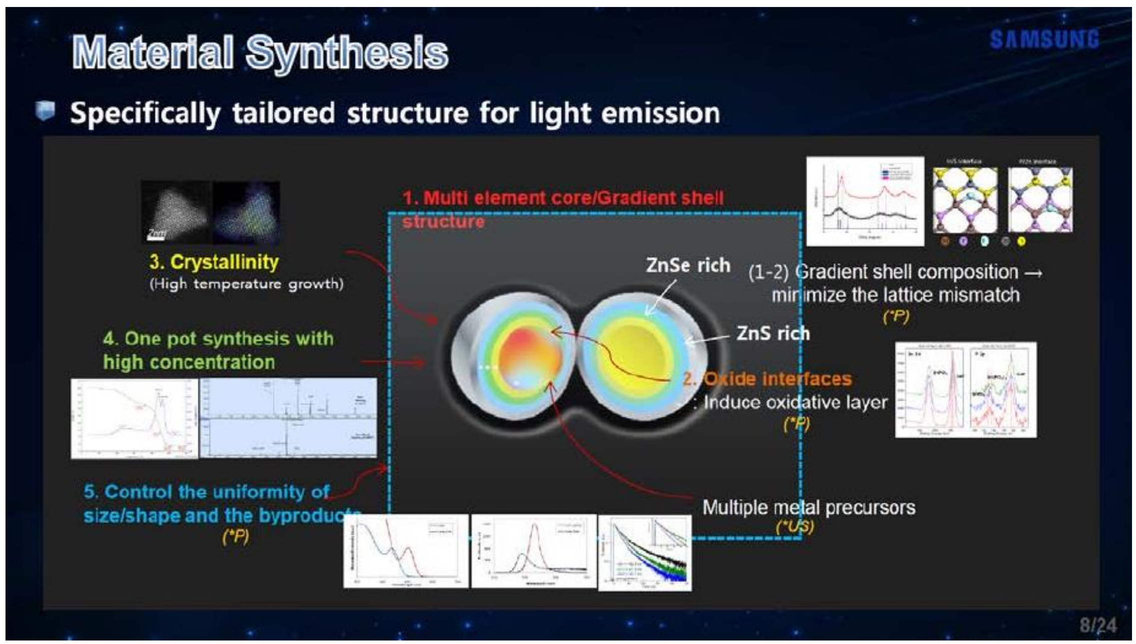
What the what?

Quantum dots are microscopic nanocrystals that glow a specific wavelength (i.e. color) when given energy. The exact color produced by the QD depends on its size: larger for longer wavelengths (redder colors), smaller for shorter wavelengths (bluer). That's a bit of an oversimplification, but that's the basic idea.

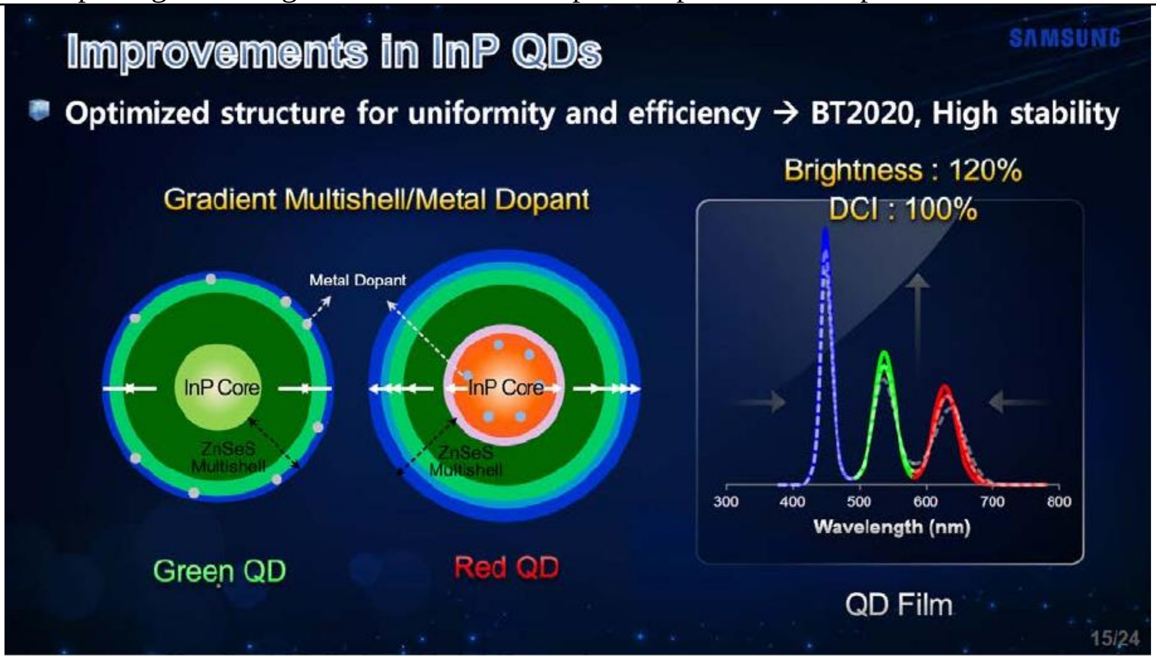
Specific wavelengths of color is what we need to great an image on a television. Using the three primary colors of red, green, and blue, we can mix a full rainbow of teals, oranges, yellows, and more.

See e.g., https://www.cnet.com/news/quantum-dots-how-nanocrystals-can-make-lcd-tvs-better/.

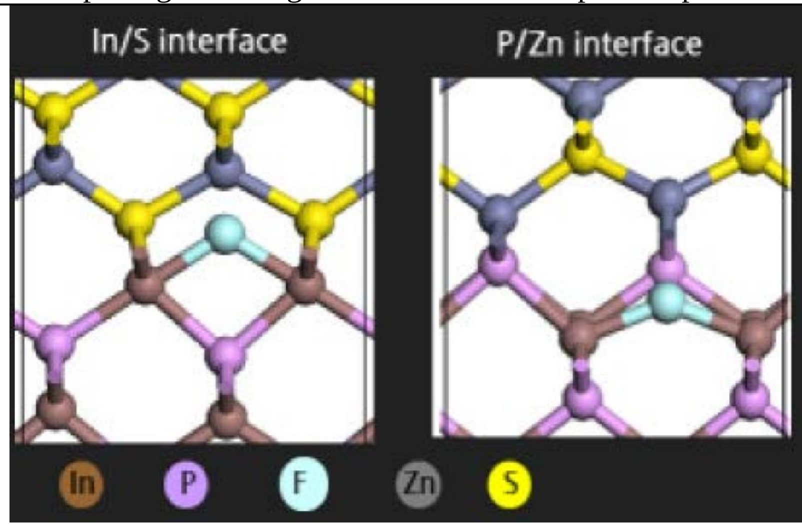
Samsung's Quantum Dots include an InP-based core, a first ZnSe shell, and a second ZnS shell.

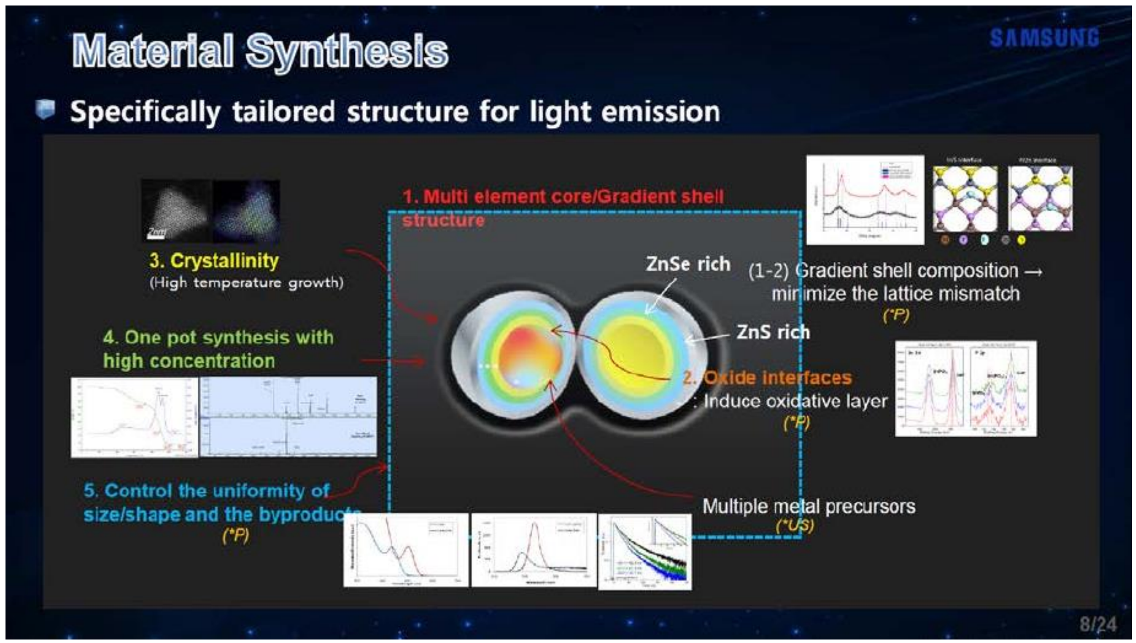


"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

	 *See e.g.*, "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (Samsung Advanced Institute of Technology, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slides 8, 15. Samsung demonstrates that a molecular interface exists between In, P, Zn, and S within their Quantum Dot cores.

"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

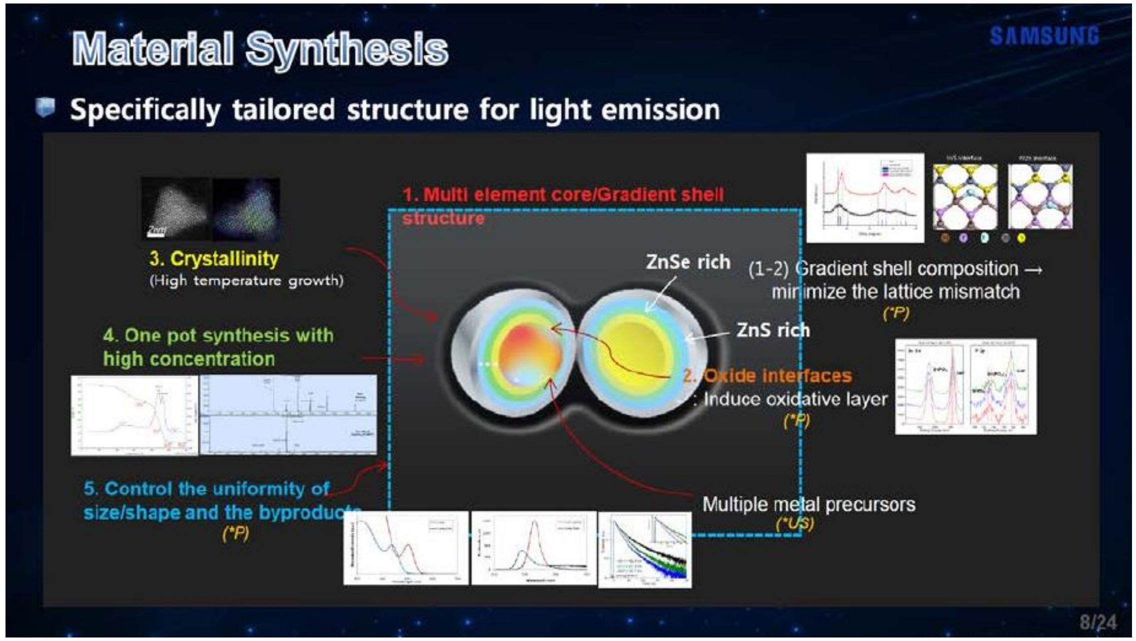




Se e.g.e, "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (Samsung Advanced Institute of Technology, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slide 8.

"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

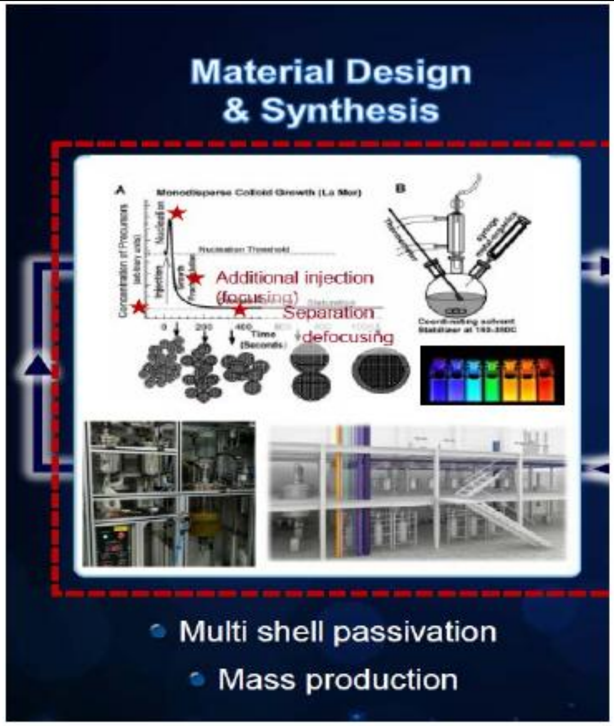
Samsung's Quantum Dots are produced using a method. For example, Samsung discloses the use of a "one pot synthesis with high concentration" to make Quantum Dots.

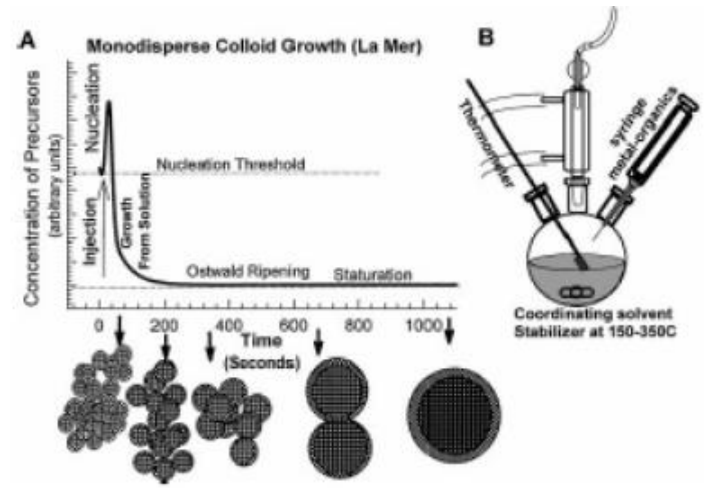


See e.g., "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (Samsung Advanced Institute of Technology, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slide 8.

Further, Samsung depicts a lab scale reaction setup for Quantum Dot synthesis and the injection of metal-organics ("nanoparticle precursor composition").

"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

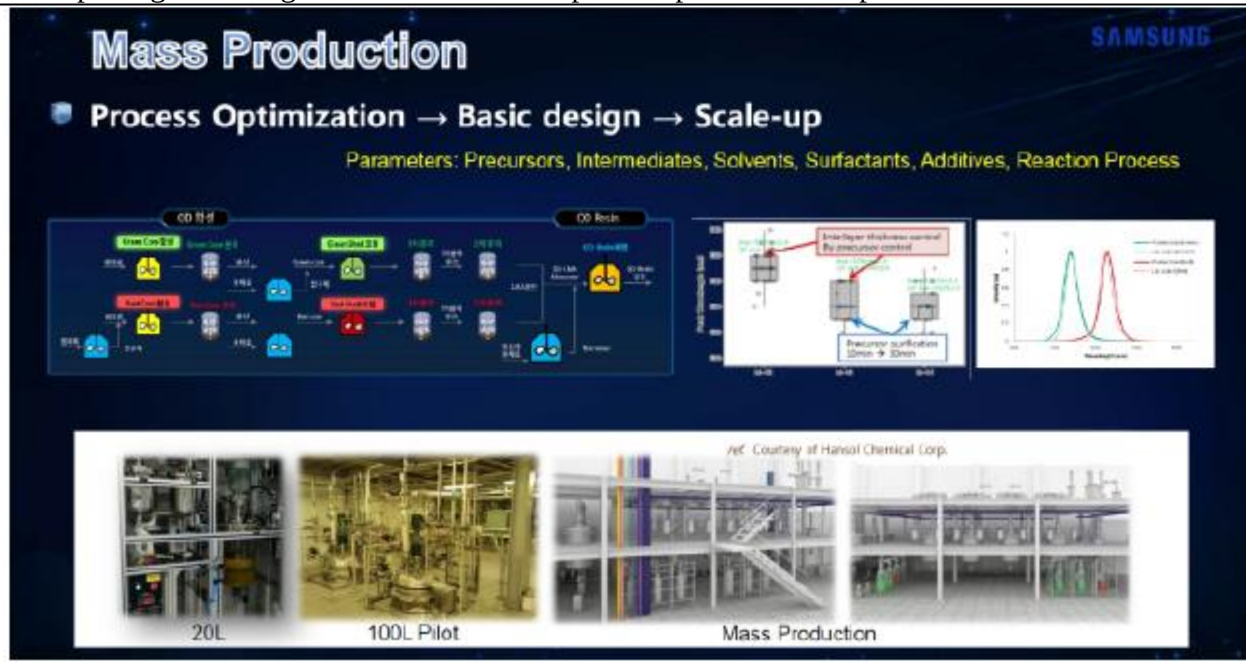




See e.g., "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (Samsung Advanced Institute of Technology, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slide 13.

Further, Samsung discloses various large scale and mass production reaction setups for Quantum Dot synthesis.

"1. A method of producing nanoparticles comprising: effecting conversion of a nanoparticle precursor composition to a material of the nanoparticles,"

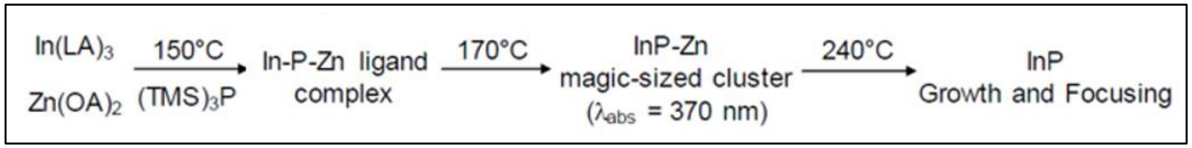


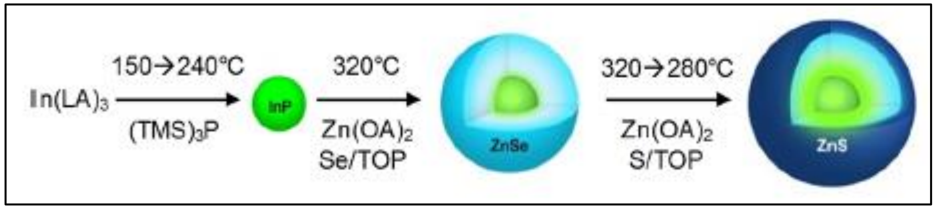
See e.g., "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (Samsung Advanced Institute of Technology, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slide 10.

Samsung's Quantum Dot synthesis process effects conversion of a nanoparticle precursor composition to a material of the nanoparticles. For example, upon information and belief, Samsung's Quantum Dots are formed using the following synthesis process, which converts a nanoparticle precursor composition to a material of the nanoparticles:

"We injected $(TMS)_3P$ at 150 °C in the presence of both indium laurate ($In(LA)_3$) and zinc oleate ($Zn(OA)_2$) precursors. At this mild temperature the In − P − Zn ligand complexes were first formed, and then they were converted to InP MSCs as the temperature increased to 170 °C, showing a sharp absorption peak at 370 nm."

See e.g., "Bright and Uniform Green Light Emitting InP/ZnSe/ZnS Quantum Dots for Wide Color Gamut Displays," ACS Appl. Nano Mater. 2019, 2, 1496−1504, Eunjoo Jang et. al. (Samsung Advanced Institute of Technology, Samsung Electronics) (Exhibit 13), at 1497[2].

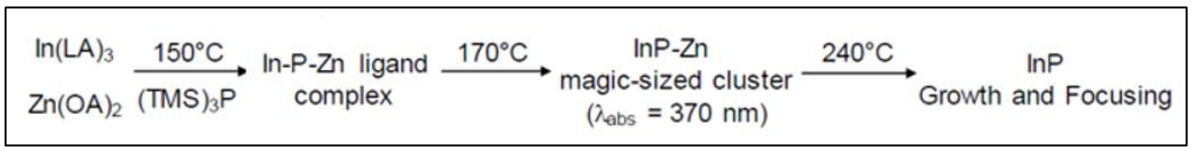
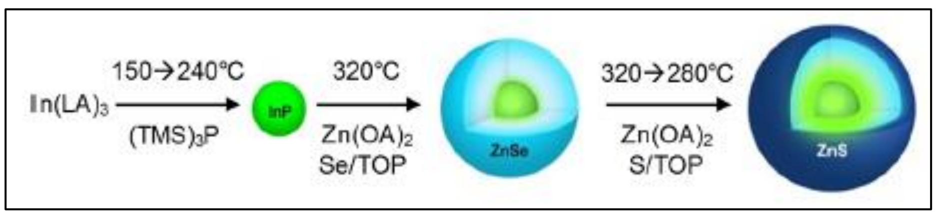




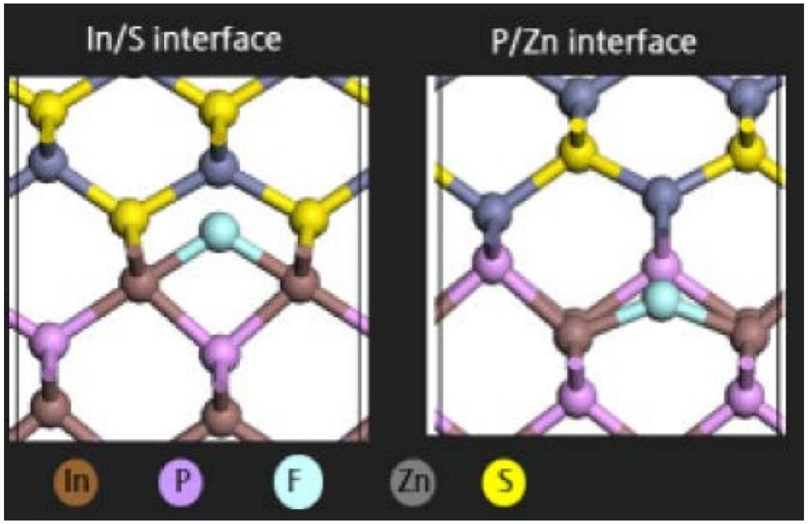
Id., *see also e.g.*, "Bright and Uniform Green Light Emitting InP/ZnSe/ZnS Quantum Dots for Wide Color Gamut Displays," ACS Appl. Nano Mater. 2019, 2, 1496−1504, Eunjoo Jang et. al. (Samsung Advanced Institute of Technology, Samsung Electronics), Supporting Information (Exhibit 14) at S-3.

[2] Dr. Eunjoo Jang of Samsung's Advanced Institute of Technology (SAIT) is responsible for the synthesis of Samsung's Quantum Dots. *See e.g.*, https://news.samsung.com/global/quantum-dot-artisan-dr-eunjoo-jang-samsung-fellow. SAIT is Samsung's Research and Development Center. *See e.g.*, https://www.sait.samsung.co.kr/saithome/mobile/research/what.do. The cited paper—authored by Eunjoo Jang—describes a method for synthesizing InP/ZnSe/ZnS quantum dots. As previously shown, Samsung describes its quantum dots as comprising a core-shell structure of InP/ZnSe/ZnS. *See e.g.*, "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (Samsung Advanced Institute of Technology, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slides 8.

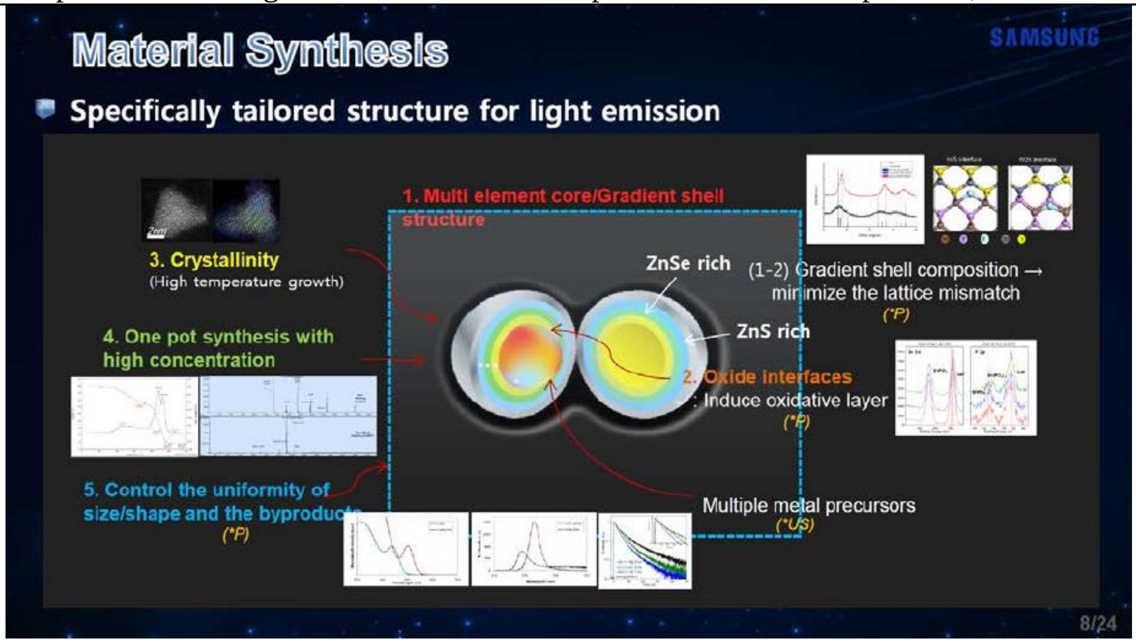
"said precursor composition comprising a first precursor species containing a first ion to be incorporated into the nanoparticles and a separate second precursor species containing a second ion to be incorporated into the nanoparticles,"

said precursor composition comprising a first precursor species containing a first ion to be incorporated into the nanoparticles and a separate second precursor species containing a second ion to be incorporated into the nanoparticles,	The method used to synthesize the Samsung Quantum Dots uses a precursor composition comprising a first precursor species containing a first ion to be incorporated into the nanoparticles and a separate second precursor species containing a second ion to be incorporated into the nanoparticles. Samsung's Quantum Dot synthesis process effects conversion of a nanoparticle precursor composition to a material of the nanoparticles. For example, upon information and belief, Samsung's Quantum Dots are formed using the following synthesis process, which converts a nanoparticle precursor composition to a material of the nanoparticles: **"We injected $(TMS)_3P$ at 150 °C in the presence of both indium laurate ($In(LA)_3$) and zinc oleate ($Zn(OA)_2$) precursors. At this mild temperature the In − P − Zn ligand complexes were first formed, and then they were converted to InP MSCs as the temperature increased to 170 °C, showing a sharp absorption peak at 370 nm."** *See e.g.*, "Bright and Uniform Green Light Emitting InP/ZnSe/ZnS Quantum Dots for Wide Color Gamut Displays," ACS Appl. Nano Mater. 2019, 2, 1496−1504, Eunjoo Jang et. al. (Samsung Advanced Institute of Technology, Samsung Electronics) (Exhibit 13), at 1497.   *Id.*, *see also e.g.*, "Bright and Uniform Green Light Emitting InP/ZnSe/ZnS Quantum Dots for Wide Color Gamut Displays," ACS Appl. Nano Mater. 2019, 2, 1496−1504, Eunjoo Jang et. al. (Samsung Advanced Institute of Technology, Samsung Electronics), Supporting Information (Exhibit 14) at S-3. The precursor composition comprises a fist precursor specific containing a first ion to be incorporated into the nanoparticles and a separate second precursor species containing a second ion to be incorporated into the nanoparticles. For example, Samsung's Quantum Dot synthesis process demonstrates that, at least, two of

"said precursor composition comprising a first precursor species containing a first ion to be incorporated into the nanoparticles and a separate second precursor species containing a second ion to be incorporated into the nanoparticles,"

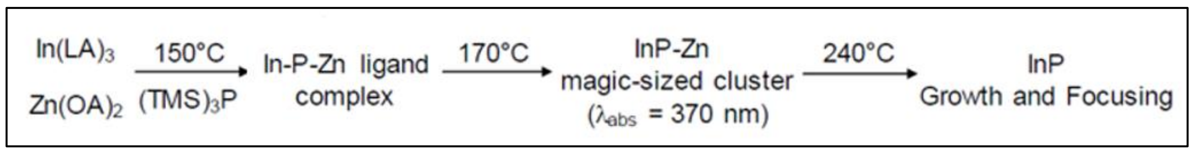
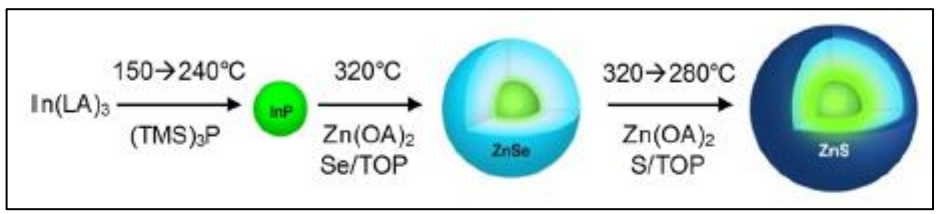
	$In(LA)_3$, $Zn(OA)_2$, and $(TMS)_3P$ are precursor species comprised of ions contained in Samsung's resulting Quantum Dot nanoparticle core. *Id.* Samsung also demonstrates that a molecular interface exists between In, P, Zn, F, and S within their Quantum Dot cores, which means that precursor species containing, at least, In, P, Zn, and S are used in the synthesis process. 

"said precursor composition comprising a first precursor species containing a first ion to be incorporated into the nanoparticles and a separate second precursor species containing a second ion to be incorporated into the nanoparticles,"

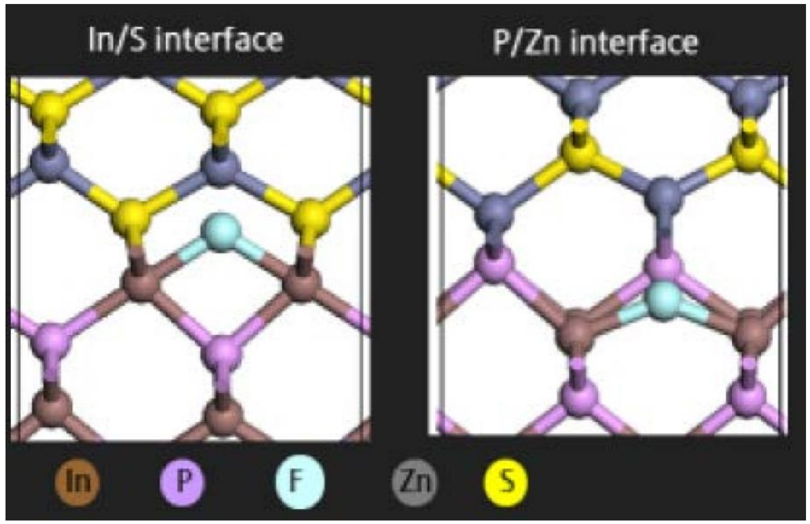
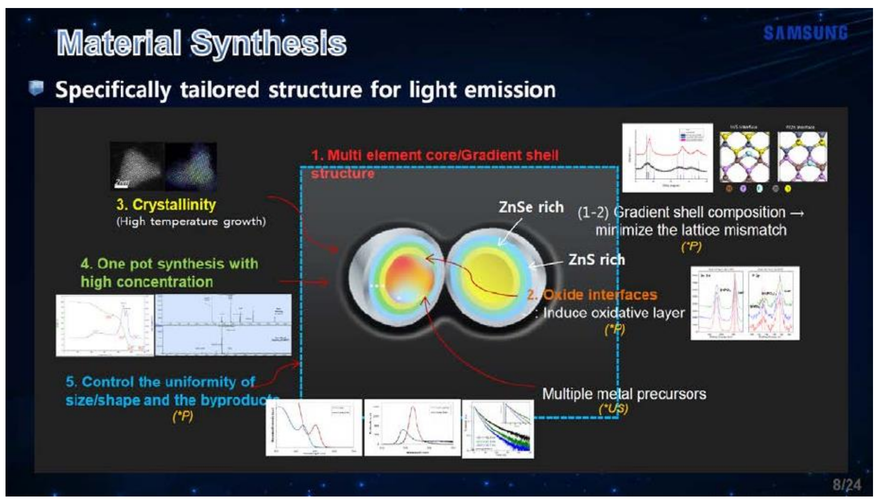


See e.g., "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (Samsung Advanced Institute of Technology, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slide 8.

"wherein said conversion is effected in the presence of a molecular cluster compound different from the first precursor species and the second precursor species under conditions permitting seeding and growth of the nanoparticles."

wherein said conversion is effected in the presence of a molecular cluster compound different from the first precursor species and the second precursor species under conditions permitting seeding and growth of the nanoparticles.	The conversion in the method used to synthesize the Samsung Quantum Dots is effected in the presence of a molecular cluster compound different from the first precursor species and the second precursor species under conditions permitting seeding and growth of the nanoparticles. For example, Samsung's Quantum Dots are formed using the following synthesis process, which converts a nanoparticle precursor composition to a material of the nanoparticles: **"We injected $(TMS)_3P$ at 150 °C in the presence of both indium laurate ($In(LA)_3$) and zinc oleate ($Zn(OA)_2$) precursors. At this mild temperature the In − P − Zn ligand complexes were first formed, and then they were converted to InP MSCs as the temperature increased to 170 °C, showing a sharp absorption peak at 370 nm."** *See e.g.*, "Bright and Uniform Green Light Emitting InP/ZnSe/ZnS Quantum Dots for Wide Color Gamut Displays," ACS Appl. Nano Mater. 2019, 2, 1496−1504, Eunjoo Jang et. al. (Samsung Advanced Institute of Technology, Samsung Electronics) (Exhibit 13), at 1497.   *Id., see also e.g.*, "Bright and Uniform Green Light Emitting InP/ZnSe/ZnS Quantum Dots for Wide Color Gamut Displays," ACS Appl. Nano Mater. 2019, 2, 1496−1504, Eunjoo Jang et. al. (Samsung Advanced Institute of Technology, Samsung Electronics), Supporting Information (Exhibit 14) at S-3. The conversion is effected in the presence of a molecular cluster compound different from the first precursor species and the second precursor species under conditions permitting seeding and growth of the nanoparticles. For example, Samsung's Quantum Dot synthesis process demonstrates that, at least, $In(LA)_3$, $Zn(OA)_2$, and $(TMS)_3P$ are precursor species and a molecular cluster compound that are all different from each other and comprised of ions contained in Samsung's resulting Quantum Dot nanoparticle core. *Id.*

"wherein said conversion is effected in the presence of a molecular cluster compound different from the first precursor species and the second precursor species under conditions permitting seeding and growth of the nanoparticles."

	Samsung also demonstrates that a molecular interface exists between In, P, Zn, F, and S within their Quantum Dot cores, which means that precursor species and a molecular cluster compound containing, at least, In, P, Zn, and S are used in the synthesis process.   *See e.g.*, "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (Samsung Advanced Institute of Technology, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slide 8.

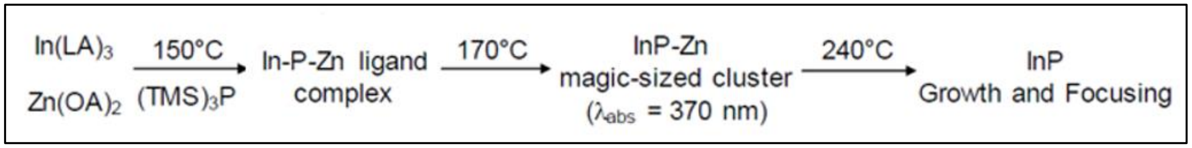
"wherein said conversion is effected in the presence of a molecular cluster compound different from the first precursor species and the second precursor species under conditions permitting seeding and growth of the nanoparticles."

The conversion is effected under conditions permitting seeding and growth of nanoparticles. For example, Samsung's Quantum Dots are formed using the following synthesis process:

"During the InP synthesis, unlike the LaMer type growth, it has been known that the initial nucleation phase completely consumes the highly reactive P precursor such as (TMS)3P, and further growth takes place through the Ostwald ripening, which results in a large size distribution."

"We injected (TMS)3P at 150 °C in the presence of both indium laurate (In(LA)3) and zinc oleate (Zn(OA)2) precursors. At this mild temperature the In − P − Zn ligand complexes were first formed, and then they were converted to InP MSCs as the temperature increased to 170 °C, showing a sharp absorption peak at 370 nm."

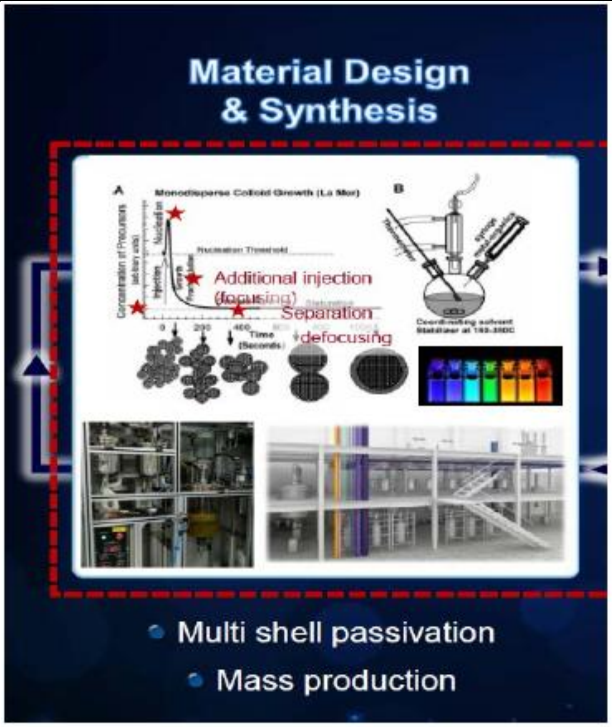
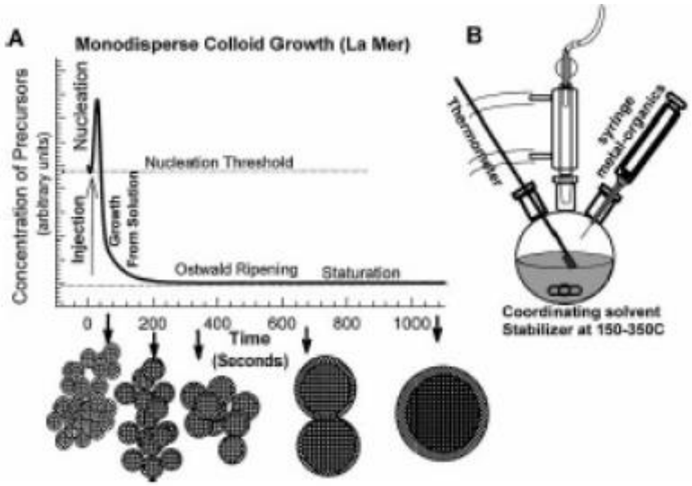
See e.g., "Bright and Uniform Green Light Emitting InP/ZnSe/ZnS Quantum Dots for Wide Color Gamut Displays," ACS Appl. Nano Mater. 2019, 2, 1496−1504, Eunjoo Jang et. al. (Samsung Advanced Institute of Technology, Samsung Electronics) (Exhibit 13), at 1497.



Id., see also e.g., "Bright and Uniform Green Light Emitting InP/ZnSe/ZnS Quantum Dots for Wide Color Gamut Displays," ACS Appl. Nano Mater. 2019, 2, 1496−1504, Eunjoo Jang et. al. (Samsung Advanced Institute of Technology, Samsung Electronics), Supporting Information (Exhibit 14) at S-3.

Further, Samsung discloses its material design and synthesis process which permits seeding and growth of nanoparticles.

"wherein said conversion is effected in the presence of a molecular cluster compound different from the first precursor species and the second precursor species under conditions permitting seeding and growth of the nanoparticles."

	  *See e.g.*, "Environmentally Friendly Quantum Dots for Display Applications," Eunjoo Jang (Samsung Advanced Institute of Technology, Samsung Electronics), Quantum Dot Forum 2018 Presentation (Exhibit 12) at Slide 13.